



**SOUTH AFRICAN POST TENSIONING ASSOCIATION**

P.O. Box 1417  
Bedfordview, 2008  
South Africa  
Tel: +27 11 455-6321  
Fax: +27 11 455-6331  
Email: [sarcea@iafrica.com](mailto:sarcea@iafrica.com)  
web: <http://www.sapta.co.za>



South African Post Tensioning  
Association

**Post-tensioning** is the prestressing of concrete in which the tendons are tensioned after the concrete has hardened and was first applied in 1938 to enhance the use of structural concrete.

It was, however, during the post-war construction boom of the 50's, 60's and 70's that the use of post-tensioning became widespread as a construction method.

**SAPTA** was established in 1987 with the following objectives:

- To be an employer body to negotiate employment conditions in the industry
- To standardise conditions of tender / contract
- To establish working specifications and safety standards
- To promote post-tensioning as an advanced method of reinforcing concrete structures
- To disseminate knowledge

**Post-tensioning** is applied to numerous type of concrete structures such as bridges, buildings, silos, reservoirs, stadia, dams, water pressure tunnels, etc.

Applications to other construction methods have evolved such as ground anchoring, heavy lifting and cable stays used in bridges and roof structures.

**Members of SAPTA** are dedicated to providing a quality service in a wide range of activities. Their international connections ensure that state of the art techniques are available in Southern Africa.



Amalgamated Steele Systems  
(Pty) Ltd  
P.O. Box 7014  
Albemarle, 1410  
Tel: +27 11 827-6721  
Fax: +27 11 827-7465  
email: [krobins@amsteele.com](mailto:krobins@amsteele.com)



Freyssinet Posten (Pty) Ltd  
P.O. Box 496  
Olifantsfontein, 1665  
Tel: +27 11 316 2174  
Fax: +27 11 316 2918  
email: [albertm@freyssiposten.co.za](mailto:albertm@freyssiposten.co.za)



Steelforce Systems  
P.O. Box 225  
Blackheath, 7581  
Tel: +27 21 905 1770  
Fax: +27 11 905 4739  
email: [kemlo@iafrica.com](mailto:kemlo@iafrica.com)



TSALA-RMS Construction Solutions (Pty) Ltd  
P.O. Box 6596  
Homestead, 1412  
Tel: +27 11 878 6820  
Fax: 27 11 878 6821  
email: [vsl@vsl.co.za](mailto:vsl@vsl.co.za)

P.O. Box 1417, Bedfordview, 2008. South Africa

Tel: +27 11 455-6321 / Fax: +27 11 455-6331 / Email: [sarcea@iafrica.com](mailto:sarcea@iafrica.com) / web: <http://www.sapta.co.za>

**South African Post Tensioning Association**

**BRIDGES**

Medium to long span concrete bridges generally use post-tensioning with a variety of construction methods eg. Off formwork, launching girder, segmental, free cantilever and incrementally launched. More recently stay cable bridges for long spans have gained popularity



**BUILDINGS**

Post-tensioning is now widely used in suspended concrete floors, offering a number of advantages:

- Larger spans, thinner floors
- Controlled deflections
- Speed of construction
- Economy of materials use and handling



Applied to low & high rise buildings, parking structures, retail shops, hotels and industrial buildings (particularly slabs on grade)

**OTHER STRUCTURES**

A wide variety of applications - particularly reservoirs, tanks, silos, stadia, towers, ect., where post-tensioning is used to counteract induced stresses.



**SPECIAL APPLICATIONS**

From post-tensioning systems a number of related techniques are used, eg. ground anchoring, heavy lifting, incremental launching and stay cables.

